DOCUMENT RESUME

ED 230 299 PS 013 577

AUTHOR Levitt, Mary J.; And Others
TITLE Mother-Child Interaction, Comprehension of Emotion, and Sharing Behavior in Toddlers.
PUB DATE Apr 83
NOTE 14p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (50th, Detroit, MI, April 21-24, 1983.)
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Altruism; Comprehension; *Infants; Interaction; Mothers; *Parent Child Relationship; *Prosocial Behavior
IDENTIFIERS *Facial Expressions; Reciprocity (Communication); *Sharing Behavior; Toddlers

ABSTRACT

To determine whether toddlers who experienced mutually responsive patterns of interchange with their mothers would be more likely to respond to the need of a peer than those who did not experience such interchange, 20 children with a mean age of 32 months were observed in pairs, with their mothers present, in structured and unstructured settings. In the structured situation, children could see one another but were separated by a gate. One child was given four age-appropriate toys; the other child was given none. If a child with toys did not share spontaneously after 4 minutes, the mother was signaled to encourage sharing. The toys were then removed from the first child and a matched set was given to the second child for 5 minutes. Ten minutes of free interaction followed. Interactive reciprocity data collected when the children were 9 to 12 months of age and a concurrent indicator of mother/child reciprocity were employed, involving six tasks varying in difficulty. Schematic drawings of faces with a happy or sad expression were used prior to the sharing situation to assess comprehension of emotion. Contrary to expectations, none of the children shared spontaneously in the presence of the barrier, even though toy-deprived children would often stand at the gate watching the child with the toys. A toddler's willingness to share at the mother's request was influenced by reciprocity within the mother/child dyad. Mother/child reciprocity was also related to the child's comprehension of emotional expression. (RH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

ED230299

Mother-Child Interaction, Comprehension of Emotion, and Sharing Behavior in Toddlers

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Mary J. Levitt

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Mary J. Levitt

Florida International University

M. Cherie Clark

Florida Atlantic and Florida International Universities

and

P. McDonnell

Florida Internaticnal University

PS 013577

Paper presented at the meeting of the Society of Research in Child Development, Detroit, April, 1983.

Mother-Child Interaction, Comprehension of Emotion, and Sharing Behavior in Toddlers

Previous findings suggest a link between the quality of the infant-mother relationship and the infant's later competence with peers (Easterbrooks & Lamb, 1979; Waters, Wippman & Sroufe, 1979). In this study, we wanted to focus specifically on whether interactive reciprocity between mother and child relates to the development of altruistic behavior toward peers; that is, would toddlers who experienced mutually responsive patterns of interchange with their mothers be more likely to respond to the need of a peer?

Although previous results regarding an association between perspective taking and altruism have been mixed (Underwood & Moore, 1982), we also considered it possible that mother-child reciprocity would relate to the child's comprehension of emotional states, which might in turn predict the degree of altruistic behavior engaged in by the child.

We found some support for two out of the three predictions. Mother-infant reciprocity was related to children's willingness to share toys with a toy-deprived peer and to the child's understanding of emotional expression. The latter was not, however, related to sharing.

Twenty children (8M; 12F) with a mean age of 32 months (range = 29 to 36 months) participated in the study with their mothers. The children were observed in pairs in both a structured and an unstructured free interaction setting. In the structured situation, a low open-lattice gate was erected between the two children. One child was given four age-appropriate toys, and

the other child was given no toys. Our intention was to create a situation in which the need of one child in a dyad would be clearly apparent to the other, and in which sharing behavior could be assessed unambiguously.

Mothers were seated near their children and instructed to be responsive but not to intervene in the children's activities.

If however a child did not share spontaneously after four minutes, the mother was signaled by a pre-arranged knock to encourage the child to give a toy to the other child. The situation continued for one remaining minute, and then the toys were removed from the first child and a matched set of toys was given to the second child for a second five-minute period. The two children were then allowed to interact freely for a period of ten minutes. The children in each dyad were matched for sex and for mother-infant reciprocity classification.

The interactive reciprocity data had been collected when the children were 9 to 12 months of age, within the context of a ten-minute free-interaction session in a laboratory playroom. In assessing reciprocity, coders rated from videotape records the frequency of occurrence of interactive initiations by mother and infant, and the extent to which these initiations were reciprocated. A mother's actions were judged to be reciprocal if she responded appropriately to her infant's bids for attention, if she engaged in games in which the baby was allowed to take the lead, imitated the baby's actions, and interested the infant in toys or created spectacles, without continuing if the infant

showed no interest. Her behavior was judged to be nonreciprocal if she failed to respond or responded inappropriately to the baby's overtures by pushing the baby into activities in which the baby was clearly not interested, pushing the infant away in response to a pick-up bid, interfering with the infant's play, and, in general, seeming more intent on imposing her own will, rather than allowing the baby to take the initiative

Infant behavior was judged to be reciprocal if the infant was responsive to the mother's overtures by playing games with, accepting toys from, or imitating the actions of the mother, and accepting comfort from her if upset. Nonreciprocal behaviors included ignoring or avoiding the mother's attempts at interaction, and either not quieting, or squirming to get down in response to the mother's attempts to comfort the infant.

Subsequent to viewing each tape, the coders rated, on five-point scales, the overall responsiveness of the mother and of the baby, and each dyad was judged to be high, moderate, or low in reciprocity. (Reliability coefficients for the two coders based on percentage of agreement ratios for the records of ten randomly chosen dyads were .97 for the frequency assessment, .90 for the responsiveness scales, and .90 for the high, moderate, low reciprocity classifications.)

As we also wanted a contemporary indicator of mother-child reciprocity, we attempted to construct a situation that would elicit comparable response patterns. Thus, in the initial phase of the current study, mothers were asked to teach their children

six tasks involving block construction, puzzle solution, and drawing. The tasks were designed to vary with respect to the degree of difficulty. Mother and child responsiveness and overall reciprocity ratings were again derived from videotape records. A mother was judged to be responsive if she used predominantly encouragement rather than coercion and positive rather than negative feedback, if she allowed the child to take the lead rather than intruding, and if she remained involved with the child. Children's responsiveness ratings were based on whether the child attempted the tasks initiated by the mother, complied with the mother's instructions, and remained involved with the mother. (Reliabilities for the mother and child responsiveness measures were .80 and .80 respectively, and .85 for the overall reciprocity measure).

Simplified schematic drawings of faces with a happy or sad expression were used prior to the sharing situation to assess comprehension of emotion. The children were asked to indicate first their basic knowledge of facial expression by pointing to the happy versus sad faces, and then their knowledge of emotion relative to various hypothetical situations by choosing the faces representing children who "fell down," and who were given "no candy," "lots of birthday presents," or "no cookies."

Contrary to expectation, we found that none of the children shared spontaneously in the presence of the barrier even though the toy-deprived children would often stand at the gate watching the child and the toys. Two of the children approached the gate with a toy and attempted to initiate

interaction with the partner, and three children in the toy-deprived condition asked their partners directly for a toy. However, one of these requests involved a prompt by the mother. In none of these cases were the overtures made by the child responded to by the partner. In fact, there was virtually no spontaneous interaction in the barrier situation. The most typical response of children in the toy condition was to play with the toys while glancing occasionally at the partner, although 35% of the children did not look at the partner at all. Children in the toy-deprived condition tended to sit quietly by the mother or stand at the gate and watch the toy-rich partner intently. Thirty-five percent of the children requested assistance from the mother in obtaining a desired toy.

These patterns of behavior can be contrasted with those in the free-play situation. While incidents of interactive play (involving at least one reciprocated interchange) were infrequent even in the latter setting, at least 50% of the children engaged in some interactive play, and 65% made some type of positive initiation (including toy offers) toward the partner. The percentage of children engaging in various activities and the percentage of ten-second intervals in which each activity occurred are presented in Table 1 (handout).

With regard to sharing behavior then our focus has shifted to the parameters influencing the child's willingness to share at the mother's request. One of the most unexpected and striking findings to emerge from this study was that for the child who received the toys second, the major determinant of sharing seemed to be whether or not the first child had shared. In

nine out of the ten dyads, if the first child shared, the second did also, and if the first child did not share, the second didn't either (p=.023, Fisher's exact probability test). Furthermore, in all but one of the cases, where both children shared, the number of toys shared by the second child was equivalent to or greater than that shared by the first child ($r(8) = .77$, $p<.01$). In total, 13 of the 20 children (65%) shared at least one toy. (One of these children did so considerably after the one-minute time period as there was a delay in recovering the toys. This child was not listed as complying with the mother's request to share in the remaining analyses, but was included as such in the present analysis because his behavior can be assumed to have influenced the second child to share.)

These data suggest to us that the young children involved in this study were sensitive to principles of reciprocal exchange. This view is reinforced by the fact that all of the children who shared in the first episode approached the gate when they were toy-deprived in the second episode.

Sharing in the structured situation was also related to behavior in the free-play situation. Children who shared engaged in more interactive play than those who did not share, $F(1,18) = 3.42$, $p<.08$.

In examining the relationship between mother-child reciprocity and sharing, we found some association between both the early and the contemporary measures of reciprocity and sharing behavior. The two reciprocity measures were moderately correlated, $r(17)=.28$

but only the correlation for the child responsiveness measures approached significance, r (17) = .37, $p<.08$. Of the mother-child dyads classified previously as being high, medium, or low in reciprocity, 50% were given the same classification for the teaching situation, and of those given a different classification, only 2 (10%) changed more than one step. In both of these cases, the change was from high to low reciprocity. Thus, while the two situations may not be directly comparable, and there may have been actual shifts in responsiveness, some consistency in dyadic behavior can be seen across the two time periods. The intercorrelations of the reciprocity measures are presented in Table 2 (handout). Table 2 also lists the correlations between the reciprocity measures and sharing at the mother's request. Since sharing by the second child was strongly associated with the behavior of the child who had the toys first, the intercorrelations were examined for all twenty children, and separately for the ten children who received the toys first. The results are comparable except that the association between the teaching situation measures and sharing is stronger in the toy first group. In general, the children from dyads characterized as higher in reciprocity were more likely to comply with the mother's request to share.

In the last column of Table 2, the correlations between the reciprocity measures and the emotional comprehension scores are presented. These data suggest that the child's ability to understand emotional expression is related to the degree of

reciprocity in the teaching condition, but not within the earlier context. Thus, children from dyads who function more smoothly in the teaching situation are more likely to have some understanding of emotional expression. Whether this reflects some general tendency for these children to be cognitively advanced or a direct relationship between dyadic responsiveness and emotional comprehension cannot be determined at this point. In general, the abilities of the children in the study with respect to this task were quite limited. Although we simplified the task considerably by using schematic faces and nonelaborated language and by asking the children to differentiate only happy and sad expressions (which Borke, 1971 reports as being the easiest to discriminate), thirteen of the twenty children failed to make even the basic distinction by pointing reliably to the happy versus sad faces. Of the remaining children, only two were able to relate the expressions to the hypothetical situations. There was no indication that emotional comprehension was related to behavior in the sharing situation, although we're not ready to rule out the possibility that such a relationship might exist for older children (cf. Rushton, 1980; Underwood & Moore, 1982).

We can conclude from this study that the toddler's willingness to share with another child at the mother's request is influenced by the degree of reciprocity within the mother-child dyad. Mother-child reciprocity is also related to the child's comprehension of emotional expression, and this relationship might conceivably prove to mediate later forms of altruism.

Our results complement those reported by Zahn-Waxler, Radke-Yarrow, and King who found, based on maternal report and home observations, that children of mothers with an empathic care-giving style are more likely to respond altruisticly to persons in distress.

While these results were of interest, what intrigued us most about this study was the unanticipated effect that our experimental manipulation had on the children's behavior. Was it the case that the barrier itself acted to inhibit interaction, or was it the ability of one child to monopolize the play materials that precluded interaction in this situation? We have been engaged in a second study varying systematically the presence or absence of the barrier and the toys, with the extent and the quality of interaction engaged in by the children in the different situations as the major focus. While we have only preliminary results at this time, it appears that although interaction may be tempered somewhat by the barrier itself, it is markedly depressed in the barrier-toy condition paralleling that employed in the present study.

References

1. Borke, H. Interpersonal perception of young children: Egocentrism or empathy. Developmental Psychology, 1971, 5, 262-269.

2. Easterbrooks, M. A. & Lamb, M. E. The relationship between quality of infant-mother attachment and infant competence in initial encounters with peers. Child Development, 1979, 50, 380-387.

3. Rushton, J. P. Altruism, socialization, and society. Englewood Cliffs: Prentice-Hall, 1980.

4. Underwood, B., & Moore, B. Perspective-taking and altruism. Psychological Bulletin, 1982, 91, 143-173.

5. Waters, E., Wippman, J. & Sroufe, L. A. Attachment, positive affect, and competence in the peer group: Two studies in construct validation. Child Development, 1979, 50, 821-829.

6. Zahn-Waxler, C., Radke-Yarrow, M., & King, R. A. Child rearing and children's prosocial initiations toward victims of distress. Child Development, 1979, 50, 319-300.

Table 1

Behavior in Toy-Rich, Toy Deprived, and Free Interaction Conditions

Condition	Percentage of Children Engaging in Behavior			Percentage of Intervals in which Behavior Occurred		
	Toy-Rich	Toy-Deprived	Free Play	Toy-Rich	Toy-Deprived	Free Play
Play Alone	84.7	11.1	70	86.7	1.8	17.5
Proximity to Mother	63.2	88.9	75	23.6	55.8	30.3
Look at Partner	63.2	88.9	---	36.3	65.8	----
Stand at gate	32.6	55.6	---	6.3	37.1	----
Inter-active Play	0	0	50	0	0	2.8

Table 2

Intercorrelations of Reciprocity, Sharing and Emotional Comprehension Measures

	1	2	3	4	5	6	7	8	9
10.5 Months									
1. Reciprocity	-	.85*	.77*	.28	.23	.25	.28	.23	-.24
2. Mother Responsiveness		---	.57*	.32	.22	.10	.54*	.53	-.04
3. Infant Responsiveness			---	.32	.18	.37+	.30	.40	.23
32 Months									
4. Reciprocity				---	.92*	.41*	.31+	.57*	.38*
5. Mother Responsiveness					---	.28	.21	.51	.40*
6. Child Responsiveness						---	-.04	.42	.30+
7. Sharing (M Requested)							---	---	-.21
8. Sharing (ToysFirst)								---	-.47
9. Emotional Comprehension									----

* $p < .05$
+ $p < .10$